

What is claimed is:

1. An apparatus for testing a substrate by irradiation of electron beam, comprising:

5 a scan parameter calculating unit for calculating a stage speed and an irradiating position of electron beam on the basis of an array of measurement points in a unit area set for each substrate species which is an object to be tested, the stage speed being a speed of a stage for supporting and moving the substrate disposed thereon;

10 a stage control unit for controlling the movement of the stage; and

an electron beam control unit for controlling the irradiating position of electron beam,

15 wherein said stage control unit drives the stage at a calculated stage speed, and said electron beam control unit controls a calculated irradiating position of electron beam in synchronism with the movement of the stage.

2. The substrate testing apparatus according to claim 1, further comprising:

20 a measurement point acquiring unit for acquiring the array of measurement points in the unit area on the basis of the substrate species information set for each substrate species.

25 3. The substrate testing apparatus according to claim

2, wherein the substrate species information is the array of measurement points in the unit area or the substrate species for designating the type of substrate, and said measurement point acquiring unit acquires the array of measurement points by directly inputting it, or by inputting the substrate species and referring to the correspondence relation data between the substrate species and the array of measurement points to acquire the corresponding array of measurement points.

10 4. A method for testing a substrate by irradiation of electron beam, comprising:

calculating a stage speed and an irradiating position of electron beam on the basis of an array of measurement points in a unit area set for each substrate species which is an object to be tested, the stage speed being a speed of a stage for supporting and moving the substrate disposed thereon; driving the stage at a calculated stage speed; and controlling a calculated irradiating position of electron beam in synchronism with the movement of said stage.

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5. The substrate testing method according to claim 4, further comprising:

acquiring the array of measurement points in the unit area on the basis of the substrate species information set for each substrate species.

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6. The substrate testing method according to claim 5, wherein the acquiring step includes acquiring the array of measurement points by directly inputting it, or by inputting the substrate species and referring to the correspondence relation data between the substrate species and the array of measurement points to acquire the corresponding array of measurement points.